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P U B L I C A T I O N S
OF THE
Astronomical Society of the Pacific.

VOL. VI. SAN FRANCISCO, CALIFORNIA, JANUARY 27, 1894. No. 34.

THE OCCULTATION OF *SATURN*, MAY 25, 1893.

BY JOHN TEBBUTT.

The steadiness and definition of the Moon and *Saturn*, both at the beginning and at the end of this interesting phenomenon, were remarkably satisfactory. Long before the calculated time of the disappearance the planet could be well seen in the strong twilight, with the 8-inch refracting telescope of this observatory ; and a few minutes before the contacts occurred, *Titan* became visible as a speck of silvery light ; it was then a few seconds distant from the planet's north limb. A magnifying power of 74 diameters was employed in all the observations, but the twilight was too strong to admit of the Moon's dark limb being seen. Guided by an approximate calculation furnished by Mr. R. T. A. INNES, F. R. A. S., of Sydney, I succeeded in obtaining the following observations, in local mean time, of the principal phases of the phenomenon :

	h.	m.	s.
First contact of the western end of the ring . .	5	16	41.8
First contact of the ball	5	16	50.5
Disappearance of <i>Titan</i>	5	17	3.3
Total disappearance of the ball	5	17	33.8
Total disappearance of the ring	5	17	47.0
Re-appearance of the western end of the ring .	6	36	20.6
The ball began to reappear	6	36	41.1
Total re-appearance of the ball	6	37	20.5
Total re-appearance of the ring	6	37	43.4

The Moon's dark limb, as it passed gradually over the ball of the planet, was sharply defined. The only remarkable phenomenon observed in connection with this occultation was a streak of

copper-colored light which lingered, for a large portion of a second, on the Moon's dark limb at the point of disappearance. After the last trace of the eastern end of the ring had disappeared, the limb was rendered visible for several seconds of arc each way from the point of disappearance. This phenomenon would seem to point to the existence of a low-lying lunar atmosphere, or of a faint luminous atmosphere round the planet itself.

THE OBSERVATORY,
WINDSOR, N. S. W., June 5, 1893.

CONSIDERATIONS ON THE METHODS OF REPRESENTING THE MILKY WAY, SUGGESTED
BY A RECENT WORK.*

BY EDWARD S. HOLDEN.

Mr. EASTON's introduction tells us that his drawings of the Milky Way were made in the years 1882-87, and that in their definitive form they refer to the latter year. The work is an entirely independent one. It was not until 1892 that Mr. EASTON compared his designs with the maps of HEIS and BOEDDICKER. This comparison shows differences between the drawings of the three observers; but these differences are such as are usually found between the drawings of the same celestial object by different artists, and in Mr. EASTON's opinion it is quite practicable to obtain a satisfactory agreement in such visual drawings if sufficient pains are taken. Where three observers agree we may assume that all three are right. Where they differ further work is necessary. There appears to be a sufficient discrepancy between certain parts of the drawings of Messrs. EASTON and BOEDDICKER to require some revision of the sort. The nature of the difficulties to be surmounted is familiar to those who have made such drawings, or it can be made plain to anyone who will examine a series of drawings of planets, the nebula of *Orion*, or of regions on the Moon, by different observers.

After the drawings were finished, Mr. EASTON had great diffi-

*C. EASTON: *La Voie Lactée dans l'hémisphère boréal*. (Containing five plates lithographed by the author, a detailed description, a catalogue of stars, etc., an historical notice together with a preface by Professor H. G. v. d. S. BAKHUYZEN, Director of the Observatory of Leyden.) Paris: Gauthier-Villars, 1893. Atlas folio.